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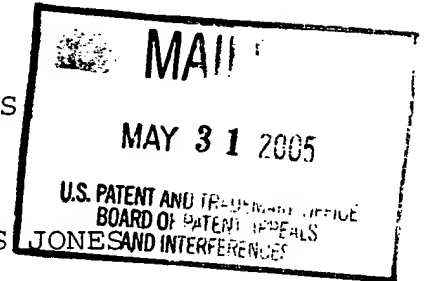
The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARC LESILE COHEN, SCOTT THOMAS
and RAVI RAVISANKAR



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JUN 6 - 2005

DIRECTOR OFFICE
TECHNOLOGY CENTER 2000

Appeal No. 2005-0535
Application No. 09/377,642

ON BRIEF

Before JERRY SMITH, LEVY and BLANKENSHIP, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-6 and 11-31, which constituted all the claims pending in the application. An amendment after final rejection was filed which cancelled claims

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11, 25-29 and 31. Therefore, this appeal is directed to the rejection of claims 1-6, 12-24 and 30.

The disclosed invention pertains to a method and apparatus for performing a raster operation of graphics data.

Representative claim 1 is reproduced as follows:

1. A method in a data processing system for performing a raster operation of graphics data, wherein the data processing system includes a system memory and a video memory, wherein the system memory and the video memory are connected by a bus and wherein the graphics data is organized into picture elements, the method comprising the data processing system implemented steps of:

selecting a first plurality of picture elements from the system memory;

selecting a second plurality of picture elements from the video memory, wherein the first plurality of picture elements and the second plurality of picture elements are selected such that changes in a direction of data on the bus are minimized when performing raster operations on the first plurality of picture elements and the second plurality of picture elements;

reading the first plurality of picture elements from the system memory;

reading the second plurality of picture elements from the video memory;

performing a raster operation on a picture element from the first plurality of picture elements and a picture element from the second plurality of picture elements to form a processed picture element;

writing the processed picture element to the video memory; and

repeating the performing and writing steps for each picture element in the first plurality of picture elements and the second plurality of picture elements until all picture elements have been processed, wherein changes in the direction of data on the bus are minimized between the reading and writing of picture elements.

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The examiner relies on the following references:

Rao	5,473,566	Dec. 05, 1995
Noorbakhsh	5,699,498	Dec. 16, 1997

Claims 1-6, 12-24 and 30 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Noorbakhsh in view of Rao.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in the claims on appeal. Accordingly, we reverse.

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Appellants have indicated that for purposes of this appeal the claims will all stand or fall together as a single group [brief, page 3]. Consistent with this indication appellants have made no separate arguments with respect to any of the claims on appeal. Accordingly, all the claims before us will stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). Therefore, we will consider the rejection against independent claim 1 as representative of all the claims on appeal.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044,

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1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR § 41.37(c)(1)(vii)(2004)].

With respect to representative claim 1, the examiner essentially finds that Noorbakhsh teaches the claimed invention except that Noorbakhsh does not teach the final three steps of

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claim 1. The examiner finds that Rao teaches these missing steps. The examiner finds that it would have been obvious to the artisan to combine the teachings of Rao into the system of Noorbakhsh [answer, pages 3-5].

Appellants argue that Noorbakhsh teaches that raster operations are performed on blocks of picture elements rather than on a single picture element as claimed. Appellants note that the claimed invention performs raster operations on a pel-by-pel basis while still performing reads as block transfers. Appellants also argue that the bit block transfer taught by Rao does not overcome the deficiencies of Noorbakhsh. They argue that both Noorbakhsh and Rao are directed to conventional bit block transfer techniques, and that neither reference teaches performing raster operations and writes to video memory on a pel-by-pel basis [brief, pages 3-7].

The examiner responds that Rao teaches that bit block transfers read data from the source block of memory locations a word or byte at a time and then write that data into the destination block of memory a word or byte at a time. The examiner asserts that performing raster operations is an inherent step during a bit block transfer operation [answer, pages 5-6].

Appellants respond that Rao does not teach that there is any association between a word or a byte of data and a pixel.

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Appellants argue, therefore, that Rao does not teach performing raster operations and writes to video memory a picture element at a time as claimed [reply brief, pages 2-4].

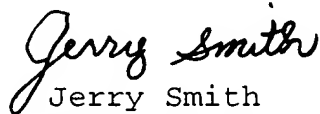
We will not sustain the examiner's rejection of representative claim 1 or of any of the other claims on appeal. The claimed invention recites that a plurality of picture elements are read before any raster operations or writing of processed data occurs. After the plurality of picture elements have been read, the claimed invention recites that a raster operation is performed on a single picture element of the plurality to form a single processed picture element and the single processed picture element is written to the video memory. The raster operation and writing of data into memory is then repeated for each single picture element of the plurality of picture elements until all the picture elements have been processed. Thus, the claimed invention requires that the raster operation and the writing of data into the video memory occur on a pel-by-pel basis. The portion of Rao relied on by the examiner teaches that the block of picture elements to be transferred is both read and written a word or a byte at a time. As noted by appellants, there is no indication in Rao that the transfer of data a word or a byte at a time results in the data being rasterized and written on a pel-by-pel basis. There is also no

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suggestion in Rao that the reading, rasterizing and writing of data has any minimizing effect on the number of changes in the direction of data on the bus between the reading and writing of picture elements. The evidence necessary to support the examiner's findings is simply not provided by the collective teachings of Noorbakhsh and Rao.

In summary, we have not sustained the examiner's rejection of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1-6, 12-24 and 30 is reversed.

REVERSED



Jerry Smith
Administrative Patent Judge



Stuart S. Levy
Administrative Patent Judge



Howard B. Blankenship
Administrative Patent Judge

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Application No. 09/516,338

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